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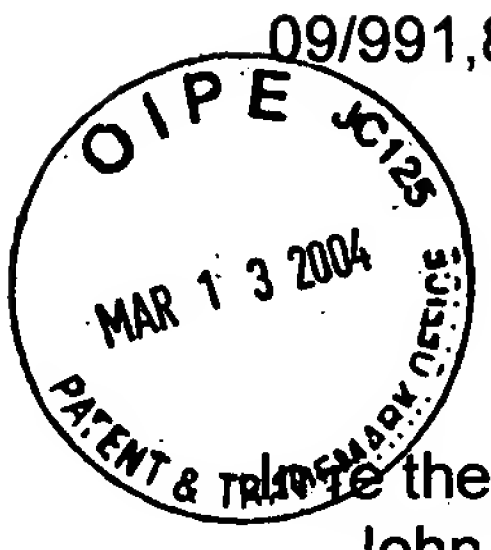
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09/991,863

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:
John Francis Gordon

Application No: 09/991,863

Filed: November 16, 2001

For: APPARATUS AND METHOD FOR
CARRYING OUT ANALYSIS OF
SAMPLES USING RADIATION
DETECTOR OUTPUT RATIOS

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Art Unit: 2877

Examiner: To Be Assigned

Attorney Docket No:
GORD-100022-USD9

POWER OF ATTORNEY BY ASSIGNEE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

As co-assignee of a partial undivided interest of the above-identified application, the undersigned, Richard Burstein, of BURSTEIN TECHNOLOGIES, INC, hereby appoints Donald Bollella, Registration No. 35,451, of DB Technical Consulting, 126 Almador, Irvine, California 92614, telephone number (949) 584-3084, to prosecute this patent application and to transact all business in the Patent and Trademark Office connected therewith and with the resulting patent.

All previous powers herein granted by BURSTEIN TECHNOLOGIES, INC. as sole assignee are hereby revoked. This paper does not serve as an agreement or acknowledgement of representation by Donald Bollella or DB Technical Consulting. This appointment is to the exclusion of the inventor(s) and his attorney(s) in accordance with the provisions of 37 CFR § 3.71.

Attached hereto in support of the above are:

- A) Request for Entry of Certificate Under 3.73(b);
- B) Certificate Under 3.73(b) listing the chain of ownership; and
- C) Relevant assignments from John Francis Gordon to the University of Glasgow; from the University of Glasgow to Burstein Technologies, Inc.; and from Burstein Technologies, Inc. to Nagaoka & Co., Ltd.

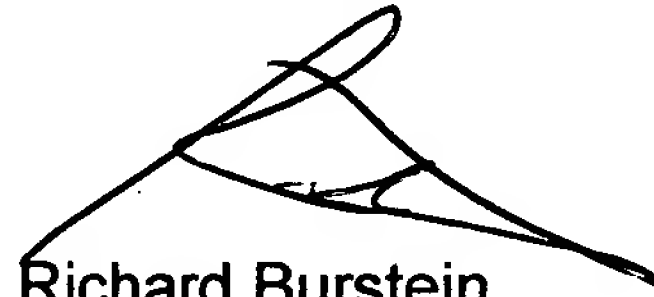
CORRESPONDENCE INSTRUCTIONS

Please direct all future correspondence to the following address:

Donald Bollella
DB Technical Consulting
126 Almador
Irvine, CA 92614

And kindly direct all telephone calls to Donald Bollella at (949) 584-3084.

Respectfully Submitted,
BURSTEIN TECHNOLOGIES, INC.



Richard Burstein
Chief Executive Officer

Date: March 11, 2004

BURSTEIN TECHNOLOGIES, INC.
2801 Ocean Park Boulevard #13
Santa Monica, CA 90405
(949) 453-1800

A circular black ink stamp. The text "OIP" is at the top, "SC125" is at the top right, "MAR 13 2004" is in the center, and "PATENT & TRADEMARK OFFICE" is at the bottom.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Art Unit: 2877

**Examiner: To Be Assigned**

Attorney Docket No:  
GORD-100022-USD9

**Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450**

As co-assignee of a partial undivided interest of the above-identified application, the undersigned, Mr. Ryosuke Nagaoka, Director and General Manager of NAGAOKA & CO., LTD., hereby appoints Donald Bollella, Registration No. 35,451, of DB TECHNICAL CONSULTING, 126 Almador, Irvine, California 92614, telephone number (949) 584-3084, to prosecute this patent application and to transact all business in the Patent and Trademark Office connected therewith and with the resulting patent.

A) Request for Entry of Certificate Under 3.73(b);

B) Certificate Under 3.73(b) listing the chain of ownership; and

C) Relevant assignment from John Francis Gordon to the University of Glasgow; from the University of Glasgow to Burstein Technologies, Inc.; and from Burstein Technologies, Inc. to Nagaoka & Co., Ltd.

**CORRESPONDENCE INSTRUCTIONS**

Please direct all future correspondence to the following address:

Donald Bollella  
DB Technical Consulting  
126 Almador  
Irvine, CA 92614

And kindly direct all telephone calls to Donald Bollella at (949) 584-3084.

Respectfully Submitted,  
NAGAOKA & CO., LTD.

Date: \_\_\_\_\_

Ryosuke Nagaoka  
Director and General Manager

100022poabyassigneeNGKC[1]

09/991,863

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:  
John Francis Gordon

Serial No: 09/991,863

Filed: November 16, 2001

For: APPARATUS AND METHOD FOR  
CARRYING OUT ANALYSIS OF  
SAMPLES USING RADIATION  
DETECTOR OUTPUT RATIOS

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Art Unit: 2877

Examiner: To Be Assigned

Attorney Docket No:  
GORD-100022-USD9

**REQUEST FOR ENTRY OF CERTIFICATE  
UNDER 37 C.F.R. SECTION 3.73(b) AND SUPPORTING STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In further support of Assignees' interest herein, Applicant respectfully requests entry of the following Certificate Under 37 C.F.R. Section 3.73(b) in connection with the above-identified application.

Applicant believes that no fee is required for filing this communication.

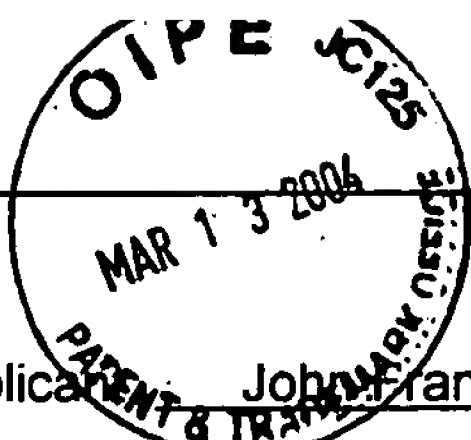
Date:

March 13, 2004

Respectfully submitted

Donald Bollella  
Registration No. 35,451

Donald Bollella, Esq.  
DB TECHNICAL CONSULTING  
126 Almador  
Irvine, CA 92614  
(949) 584-3084



**CERTIFICATE UNDER 37 CFR 3.73(b)**

Applicant: John Francis Gordon

Application No: 09/991,863 Filed: November 16, 2001

Entitled: **APPARATUS AND METHOD FOR CARRYING OUT ANALYSIS OF SAMPLES USING  
RADIATION DETECTOR OUTPUT RATIOS**

Burstein Technologies, Inc, a U.S. Corporation and  
Nagaoka & Co., Ltd., a Japanese Corporation,  
(Name of Assignees) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

certifies that it is the assignee of a partial undivided right, title and interest in the patent application identified above by virtue of either:

A. ☐ An assignment from the inventor(s) of the patent application identified above. The assignment was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached;

OR

B. ☒ A chain of title from the inventor(s), of the patent application identified above, to the current assignee as shown below:

1. From: John Francis Gordon To: University of Glasgow  
The document was recorded in the Patent and Trademark Office at Reel 8634, Frame 0810, or for which a copy thereof is attached.
2. From: University of Glasgow To: Burstein Technologies, Inc.  
The document was recorded in the Patent and Trademark Office at Reel 013832, Frame 0554, or for which a copy thereof is attached.
3. From: Burstein Technologies, Inc. To: Nagaoka & Co., Ltd.  
The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

**STATEMENT IN SUPPORT OF ASSIGNEE'S INTEREST**

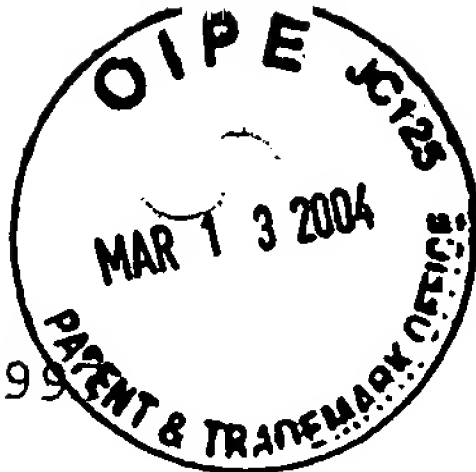
The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of the undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned (whose title is supplied below) is empowered to sign this certificate on behalf of the assignee.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

March 13, 2004  
Date

Donald Bollella  
Donald Bollella

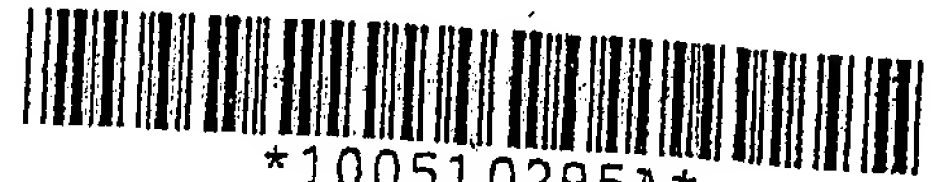


UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SEPTEMBER 03, 1997

LAHIVE & COCKFIELD, LLP  
ANTHONY A. LAURENTANO, ESQ.  
28 STATE STREET  
BOSTON, MA 02109

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UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 07/31/1997

REEL/FRAME: 8634/0810  
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
GORDON, JOHN FRANCIS

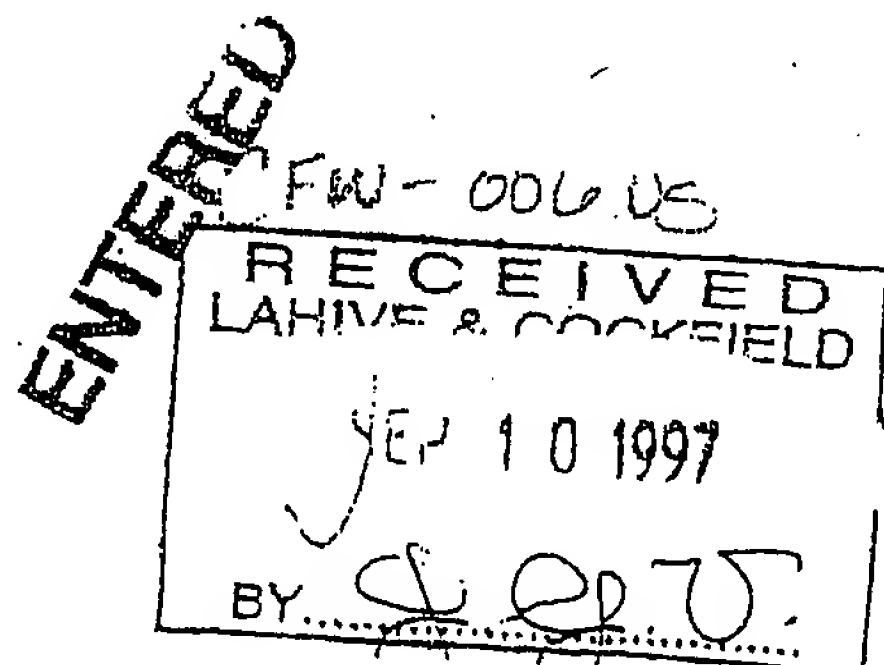
DOC DATE: 04/16/1997

ASSIGNEE:  
UNIVERSITY COURT OF THE UNIVERSITY OF GLASGOW, THE  
UNIVERSITY AVENUE, NO. 2 THE SQUARE  
GLASGOW G12 8QQ, UNITED KINGDOM

SERIAL NUMBER: 08809402  
PATENT NUMBER:

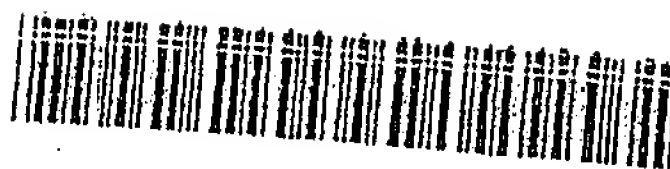
FILING DATE:  
ISSUE DATE:

SHAREIL COLES, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS





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JUL 31 1997

To the Honorable Commissioner of Patents and Trademarks

100510295

ad original documents or copy thereof.

## 1. Name of conveying party(ies):

John Francis Gordon

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other \_\_\_\_\_

Execution Date: April 16, 1997

## 2. Name and address of receiving party(ies)

Name: THE UNIVERSITY COURT OF THE UNIVERSITY OF GLASGOW

Internal Address: \_\_\_\_\_

Street Address: University Avenue, No. 2 The SquareGlasgow G12 8QQ, United KingdomAdditional name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)  
08/809,402

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Anthony A. Laurentano, Esq.Internal Address: Lahive & Cockfield, LLPStreet Address: 28 State StreetCity: Boston State: MA ZIP: 02109

## 6. Total number of applications and patents involved:

one

7. Total fee (37 CFR 3.41)..... \$40.00

☒ Enclosed☐ Authorized to be charged to deposit account

## 8. Deposit account number:

12-0080

DO NOT USE THIS SPACE

## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Anthony A. Laurentano, Reg. No. 38,220

Name of Person Signing

Signature

7/28/97

Date

Total number of pages including cover sheet, attachments, and document:

2

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks, Box Assignments  
Washington, D.C. 20231V12/1997 TTOM11  
FC:581

00000001 08809402

40.00 OP

SOL. OR JOINT

A S S I G N M E N T

WHEREAS, I, JOHN FRANCIS GORDON, of 5 Park Crescent, Torrance, Glasgow G64 4BH, United Kingdom, have invented an APPARATUS AND METHOD FOR CARRYING OUT ANALYSIS OF SAMPLES for which I am about to make application for Letters Patent of the United States of America, and

WHEREAS, THE UNIVERSITY COURT OF THE UNIVERSITY OF GLASGOW, a corporation of the United Kingdom, having its principal place of business at University Avenue, No. 2 The Square, Glasgow G12 8QQ, United Kingdom, desires to acquire the entire right, title and interest in and to said invention:

APPARATUS AND METHOD FOR CARRYING OUT ANALYSIS OF SAMPLES

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, I, JOHN FRANCIS GORDON, by these presents do sell, assign and transfer unto said corporation, its successors and assigns, all right, title and interest in the United States of America and all foreign countries in and to said invention as described in the patent application, executed by me on the 16th day of April, 1997, (and I hereby authorize my attorneys, authorized to prosecute said application to here insert the filing date and serial number of the said application, as soon as it is known, Serial No. 08/809,402, filed March 21, 1997), and to any improvements on said invention heretofore or hereafter made while I am in the employ of said corporation, and any divisions or continuations of said application, and all Patents, United States and foreign, granted upon any such applications or for the inventions described therein, and any reissues or extensions of said Patents; and I hereby authorize and request the Commissioner of Patents to issue all Patents on said United States applications to said corporation as assignee thereof.

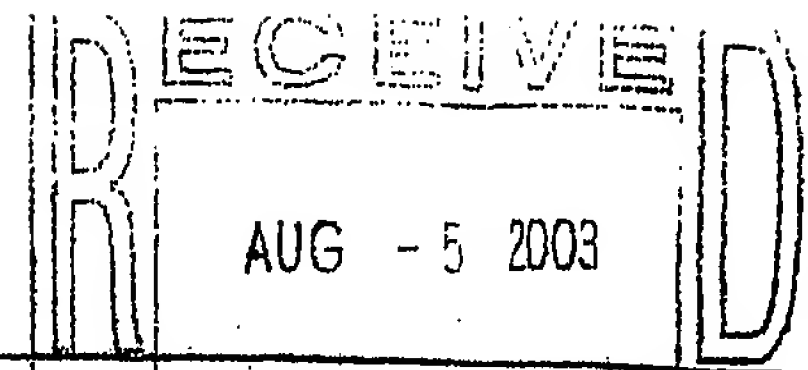
FOR SAID CONSIDERATIONS, I hereby covenant and agree that I am the owner of the full title herein assigned and have the right to assign the same, and agree that I will communicate to said corporation or its representatives, any facts known to me respecting said invention or inventions and testify in any legal proceedings relating thereto when called upon, and will sign all instructions and documents and render such assistance which in the judgement of said corporation is necessary to vest in it and protect the legal title sought to be assigned.

16th April 1997  
Date

John Gordon  
JOHN FRANCIS GORDON



UNITED STATES  
PATENT AND  
TRADEMARK OFFICE



JULY 29, 2003

PTAS

Under Secretary of Commerce For Intellectual Property and  
Director of the United States Patent and Trademark Office  
Washington, DC 20231  
www.uspto.gov

BURSTEIN TECHNOLOGIES, INC.  
DONALD BOLLELLA, ESQ.  
163 TECHNOLOGY DRIVE  
LEGAL DEPARTMENT  
IRVINE, CA 92618



\*102389867A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/10/2003

REEL/FRAME: 013832/0554  
NUMBER OF PAGES: 7

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

UNIVERSITY COURT OF THE UNIVERSITY  
OF GLASGOW

DOC DATE: 02/07/2003

ASSIGNEE:

BURSTEIN TECHNOLOGIES, INC.  
163 TECHNOLOGY DRIVE  
IRVINE, CALIFORNIA 92618

SERIAL NUMBER: 08809402  
PATENT NUMBER: 5892577

FILING DATE: 07/28/1997  
ISSUE DATE: 04/06/1999

SERIAL NUMBER: 09156475  
PATENT NUMBER: 6256088

FILING DATE: 09/18/1998  
ISSUE DATE: 07/03/2001

SERIAL NUMBER: 09407001  
PATENT NUMBER:

FILING DATE: 09/28/1999  
ISSUE DATE:

SERIAL NUMBER: 09284421  
PATENT NUMBER:

FILING DATE: 06/11/1999  
ISSUE DATE:

SERIAL NUMBER: 09410837  
PATENT NUMBER:

FILING DATE: 10/01/1999  
ISSUE DATE:

SERIAL NUMBER: 09411624  
PATENT NUMBER:

FILING DATE: 10/01/1999  
ISSUE DATE:

SERIAL NUMBER: 09410838  
PATENT NUMBER:

FILING DATE: 10/01/1999  
ISSUE DATE:

SERIAL NUMBER: 09642996  
PATENT NUMBER:

FILING DATE: 08/21/2000  
ISSUE DATE:

SERIAL NUMBER: 09643030  
PATENT NUMBER: 6339473

FILING DATE: 08/21/2000  
ISSUE DATE: 01/15/2002

SERIAL NUMBER: 09665481  
PATENT NUMBER: 6476907

FILING DATE: 09/20/2000  
ISSUE DATE: 11/05/2002

SERIAL NUMBER: 09665930  
PATENT NUMBER: 6327031

FILING DATE: 09/20/2000  
ISSUE DATE: 12/04/2001

SERIAL NUMBER: 60283213  
PATENT NUMBER:

FILING DATE: 04/11/2001  
ISSUE DATE:

SERIAL NUMBER: 09991429  
PATENT NUMBER:

FILING DATE: 11/16/2001  
ISSUE DATE:

SERIAL NUMBER: 09991863  
PATENT NUMBER:

FILING DATE: 11/16/2001  
ISSUE DATE:

SERIAL NUMBER: 10121281  
PATENT NUMBER:

FILING DATE: 04/11/2002  
ISSUE DATE:

SAUNDRA BALLENGER, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

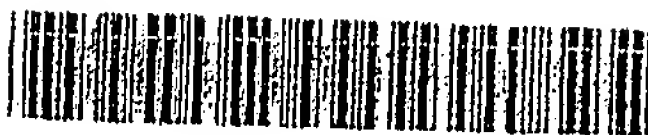
03-14-2003

Form PTO-1595

(Rev. 10/02)

OMB No. 0651-0027 (exp. 6/30/2005)

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U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

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To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

University Court of the University of Glasgow  
University Avenue, Glasgow  
UNITED KINGDOM

31083

## 2. Name and address of receiving party(ies)

Name: BURSTEIN TECHNOLOGIES, INC.

Internal Address: \_\_\_\_\_

Street Address: 163 Technology Drive

City: Irvine State: CA Zip: 92618

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

Execution Date: February 7, 2003

Additional name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

See attached list

B. Patent No.(s)

See attached list

Additional numbers attached? ☒ Yes ☐ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Donald Bollella, Esq.

Internal Address: Legal Department

Street Address: Burstein Technologies, Inc.

163 Technology Drive

City: Irvine State: CA Zip: 92618

## 6. Total number of applications and patents involved 15

7. Total fee (37 CFR 3.41) \$ 600.00

☐ Enclosed☒ Authorized to be charged to deposit account

## 8. Deposit account number:

50-1781

(Attach duplicate copy of this page if paying by deposit account)

FINANCE SECTION

MAR 11 AM 7 37

RECORDS

DO NOT USE THIS SPACE

## 9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Donald Bollella, Esq.

Name of Person Signing

Signature

March 10, 2003

Date

Total number of pages including cover sheet, attachments, and documents 6

13/2003 ECDPER 00000221 501781

08809402

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

FD-800

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**SUPPLEMENTAL SHEET TO FORM PTO-1595**

| <b>Serial No.</b> | <b>Patent No.</b>          | <b>Filing Date</b> |
|-------------------|----------------------------|--------------------|
| 08/809,402        | (Now US Pat No. 5,892,577) | March 21, 1997     |
| 09/156,475        | (Now US Pat No. 6,256,088) | September 18, 1998 |
| 09/407,001        |                            | September 28, 1999 |
| 09/284,421        |                            | June 11, 1999      |
| 09/410,837        |                            | October 1, 1999    |
| 09/411,624        |                            | October 1, 1999    |
| 09/410,838        |                            | October 1, 1999    |
| 09/642,996        |                            | August 21, 2000    |
| 09/643,030        | (Now US Pat No. 6,339,473) | August 21, 2000    |
| 09/665,481        |                            | September 20, 2000 |
| 09/665,930        | (Now US Pat No. 6,327,031) | September 20, 2000 |
| 60/283,213        |                            | April 11, 2001     |
| 09/991,429        |                            | November 16, 2001  |
| 09/991,863        |                            | November 16, 2001  |
| 10/121,281        |                            | April 11, 2002     |



## ACKNOWLEDGEMENT OF ASSIGNMENT AND ASSIGNMENT

WHEREAS, John Francis Gordon (hereinafter referred to as "GORDON") as the inventor of an invention entitled "Apparatus And Method For Carrying Out Analysis Of Samples," as disclosed in application for United States Patent Serial No. 08/809,402, filed March 21, 1997 (hereinafter referred to as the "Gordon I Invention"), has previously assigned the entire right, title, and interest in the invention and to all continuations and divisions thereof, and all patents, United States and foreign, granted upon such applications or for the inventions described therein, and any reissues or extensions of said patents, United States Letters Patent No. 5,892,577 granted April 6, 1999; United States Letters Patent No. 6,256,088 granted July 3, 2001; United States Letters Patent No. 6,327,031 granted December 4, 2001; and United States Letter Patent No. 6,339,473 granted January 15, 2002 having issued (hereinafter referred to as the "Gordon I Patent Rights") to The University Court of The University of Glasgow, a corporation of the United Kingdom, having its principal place of business at University Avenue, Glasgow, United Kingdom (hereinafter referred to as "UNIVERSITY"), as recited in the assignment dated April 16, 1997 recorded on July 31, 1997, in the assignment records of the United States Patent Office at reel/frame number of 8634/0810;

WHEREAS, GORDON as the inventor of the invention entitled "Apparatus And Method For Conducting Assays," as disclosed in application for United States Letters Patent Serial No. 09/284,421, filed April 8, 1999 (hereinafter referred to as the "Gordon II Invention"), has previously assigned the entire right, title, and interest in the invention, and all continuations and divisions thereof, and all patents, United States and foreign, granted upon such application or for the inventions described therein, and any reissues or extensions of said patents (hereinafter referred to as the "Gordon II Patent Rights"), to Molecular Drives Ltd., a Limited Company registered under the Companies Act of 1985, Registered Number SC157075, having a place of business at 39 Western Court, University of Glasgow, Scotland, United Kingdom (hereinafter referred to as "MOLECULAR DRIVES"), as recited in the assignment dated June 1, 1999 recorded on June 11, 1999, in the assignment records of the United States Patent Office at reel/frame number of 010036/0805;

WHEREAS, MOLECULAR DRIVES has assigned the entire right, title, and interest in the Gordon II Patent Rights to UNIVERSITY, as recited in the assignment dated June 7, 1999 recorded on November 18, 1999 in the assignment records of the United States Patent Office at reel/frame number of 010400/0621;

WHEREAS, UNIVERSITY has agreed to sell the above identified Gordon I and Gordon II Inventions and the Gordon I and Gordon II Patent Rights to Burstein Technologies, Inc. (hereinafter referred to as "BTI") pursuant to that certain Exclusive License, Technology Transfer, and Technology Acquisition Agreement dated July 23, 1999 by and between UNIVERSITY, MOLECULAR DRIVES, GORDON, and Digital Drives, Inc., formerly a Nevada corporation (said Digital Drives, Inc. hereinafter referred to as "DIGITAL") and further pursuant to the "Clarification and Amendment of Technology Transfer Agreement between University of Glasgow and Burstein Technologies, Inc" dated November 30, 2001 by and between UNIVERSITY, BTI, and GORDON;

WHEREAS, BTI has prepared and filed U.S. Provisional Patent Application No. 60/283,213 on April 11, 2001 and related U.S. Patent Application No. 10/121,281 on April 11, 2002 entitled "Multi-Parameter Assays Including Analysis Discs and Methods Relating Thereto" (hereinafter referred to as the Gordon III invention), said Gordon III invention being based in part on an unfiled disclosure prepared during GORDON's affiliation with MOLECULAR DRIVES and the UNIVERSITY;

WHEREAS, UNIVERSITY, through its exclusive licensee BTI, has prosecuted and or caused the filing of the following United States applications for Letters Patent of the United States based upon the Gordon I, II, and III Inventions:

| <u>Serial No.</u>                     | <u>Filing Date</u> |
|---------------------------------------|--------------------|
| 08/809,402 (Now US Pat No. 5,892,577) | March 21, 1997     |
| 09/156,475 (Now US Pat No. 6,256,088) | September 18, 1998 |
| 09/407,001                            | September 28, 1999 |
| 09/248,421                            | June 11, 1999      |
| 09/410,837                            | October 1, 1999    |
| 09/411,624                            | October 1, 1999    |
| 09/410,838                            | October 1, 1999    |
| 09/642,996                            | August 21, 2000    |
| 09/643,030 (Now US Pat No. 6,339,473) | August 21, 2000    |
| 09/655,481                            | September 20, 2000 |
| 09/665,930 (Now US Pat No. 6,327,031) | September 20, 2000 |
| 60/283,213                            | April 11, 2001     |
| 09/991,429                            | November 16, 2001  |
| 09/991,863                            | November 16, 2001  |
| 10/121,281                            | April 11, 2002     |

(said applications being hereinafter referred to as the "Gordon Applications").

WHEREAS, DIGITAL has been merged into BTI as of August 14, 2001;

WHEREAS, UNIVERSITY, the assignor herein is presently the sole owner of the entire right, title, and interest to the Gordon I and Gordon II Inventions and Gordon I and Gordon II Patent Rights without any encumbrances thereon or any contingent or reversionary interests therein; and



WHEREAS, BTI desires to acquire the entire right, title and interest in and to the Gordon I, Gordon II, and Gordon III Inventions and the Gordon I, Gordon II, and Gordon III Patent Rights;

NOW, THEREFORE, for good and valuable consideration as recited in said certain Exclusive License, Technology Transfer, and Technology Acquisition Agreement dated July 23, 1999, and the "Clarification and Amendment" dated November 30, 2001, the receipt and sufficiency of which is hereby acknowledged, UNIVERSITY does hereby sell, assign, transfer and set over unto BTI, its successors and assigns, the entire right, title, and interest in and to said Gordon I, Gordon II, and Gordon III Inventions including the corresponding International Patent Application No. PCT/GB95/02186 filed September 15, 1995, including the priority application thereof GB9418981.8 filed September 21, 1994, and all subsequently filed related applications based thereon; International Patent Application No. PCT/GB97/02708 filed October 8, 1997, and the priority application thereof, GB9620934.1 filed October 8, 1996 and all improvements thereon; and including International Application No. PCT/US02/11620 filed April 11, 2002, and all subsequently filed applications based thereon; in and to any and all patents and patent applications pertaining to or based upon said inventions and improvements, including said identified Gordon Applications, and including any and all divisional and continuing applications and continuations-in-part; and in and to any and all Letters Patents, which may be granted and issued on said Gordon I, Gordon II, and Gordon III Inventions and said Gordon I, Gordon II, and Gordon III Patent Rights, or any of them, not only for, to and in the United States of America, its territories and possessions, but for, to and in all countries foreign thereto, together with and including all priority rights based upon any and all applications in the United States of America covered by this Assignment.

And for the above-named considerations, UNIVERSITY does hereby agree that it will at the request of BTI, execute any and all applications for Letters Patents for said inventions and any and all other papers and documents and do all other and further lawful acts that BTI may reasonably deem necessary or desirable to obtain U.S. and foreign Letters Patents on said inventions, to secure the grant of such Letters Patents and to perfect and vest in BTI the entire right, title, and interest in the inventions, applications, and Letters Patents.

Signed on behalf of  
The University Court of the University  
Of Glasgow

Dated: 27/01/03

*Dugald M Mackie*  
By: DUGALD M MACKIE  
Title: Secretary of Govt.

(The execution of this document by The University Court Of The University Of Glasgow is being acknowledged by a Notar and an apostille.)


\*\*\*\*\*

Before me, *James C Wood*  
Notary Public

Acknowledged By:

Molecular Drives, Ltd.

Dated: 28<sup>th</sup> Jan 2003



Graham Patterson  
Director

(A certificate of acknowledgment is attached hereto for the above execution by Molecular Drives, Inc.)

\*\*\*\*\*

Acknowledged By:

Dated: Feb 7<sup>th</sup> 2003



John Francis Gordon  
Inventor

(A certificate of acknowledgment is attached hereto for the above execution by John Francis Gordon.)

\*\*\*\*\*

# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Orange } ss.

On February 7, 2003, before me, Jennifer S. Allen

Name and Title of Officer (e.g., "Jane Doe, Notary Public")

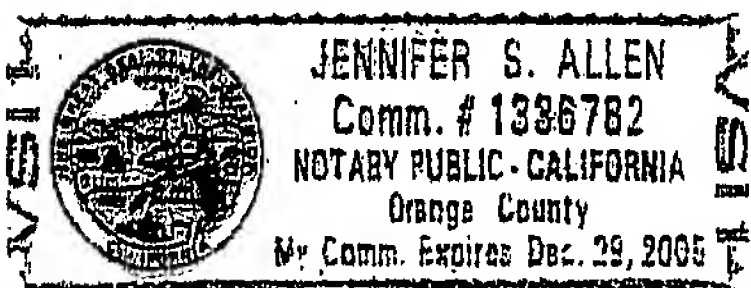
personally appeared John F. Gordon

Name(s) of Signer(s)

☐ personally known to me

☒ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Jennifer S. Allen  
Signature of Notary Public

Place Notary Seal Above

## OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

### Description of Attached Document

Title or Type of Document: Acknowledgement of Assignment and Assignment

Document Date: 2/7/03

Number of Pages: 4

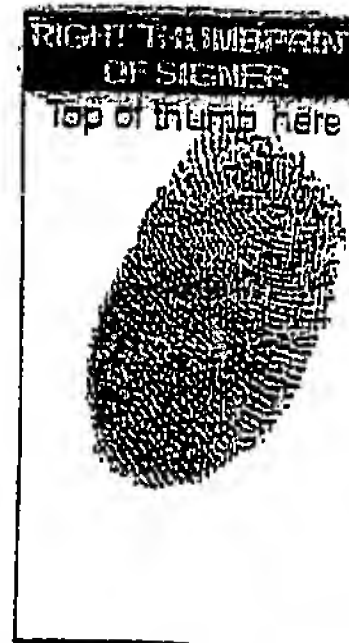
Signer(s) Other Than Named Above: \_\_\_\_\_

### Capacity(ies) Claimed by Signer

Signer's Name: \_\_\_\_\_

- ☐ Individual  
☐ Corporate Officer — Title(s): \_\_\_\_\_  
☐ Partner — ☐ Limited ☐ General  
☐ Attorney in Fact  
☐ Trustee  
☐ Guardian or Conservator  
☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_



## ASSIGNMENT

WHEREAS, Burstain Technologies, Inc., a Delaware Corporation having offices at 163 West Technology Dr., Ste. 200, Irvine, California, 92618 USA (hereinafter "ASSIGNOR"), represents and warrants that it is the sole owner of the entire right, title, and interest to certain new and useful improvements for which ASSIGNOR has filed patent applications and/or obtained issued patents in the United States and in other countries, which patents and patent applications are listed in Schedule A to this Assignment (hereinafter "the Patents and Patent Applications"); and

WHEREAS, Nagaoka & Co., Ltd., a Japanese corporation having offices at 7-18, Nishinomiyahama 4-Chome, Nishinomiya-Shi, Hyogo, Japan 662-0934 (hereinafter "ASSIGNEE") desires to purchase an undivided partial right, title, and interest in and to the inventions disclosed in the Patents and Patent Applications, such that ASSIGNEE and ASSIGNOR are co-owners of the Patents and Patent Applications;

NOW, THEREFORE, in consideration of mutual covenants and obligations set forth in a contemporaneous Patent Assignment Agreement, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNOR hereby further acknowledges that it has sold, assigned, and transferred, and by these presents does hereby sell, assign, and transfer, unto ASSIGNEE, its successors, legal representatives, and assigns, an undivided partial right, title, and interest throughout the world in, to, and under the said improvements, and the said Patents and Patent Applications and all Patents that may be granted thereon, and all provisional applications relating thereto, and all divisions, continuations, reissues, reexaminations, renewals, and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent that may hereafter be filed for said improvements or for the said Patents and Patent Applications in any country or countries foreign to the United States; and ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, and any Official of any country foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patents for said improvements and all Letters Patents resulting from the Patents and Patent Applications jointly to ASSIGNOR and ASSIGNEE, their successors, legal representatives, and assigns, in accordance with the terms of this Agreement.

ASSIGNOR does hereby sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns an equal undivided partial interest in all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of the said issued Letters Patents;


ASSIGNOR hereby covenants and agrees that it will communicate to ASSIGNEE, its successors, legal representatives, and assigns any facts known to ASSIGNOR respecting the Patents and Patent Applications immediately upon becoming aware of those facts, and that it will testify in any legal proceeding involving any of the Patents and Patent Applications, will sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths, and will generally do everything possible to aid ASSIGNEE, its successors, legal representatives, and assigns to obtain and enforce ASSIGNEE's interest in the Patents and Patent Applications in all countries.

ASSIGNEE hereby accepts and agrees to the foregoing assignment.

[SIGNATURES ON FOLLOWING PAGE]

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 4<sup>th</sup> day of November, 2003

**Burstein Technologies, Inc.**

By: 

Name Printed: Rina Burstein

Title: CEO

Date: November 3, 2003

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 4<sup>th</sup> day of November, 2003

**Nagaoka & Co., Ltd.**

By: 

Name Printed: Ryosuke Nagaoka

Title: Director

Date: Nov 4<sup>th</sup>, 2003

STATE OF California

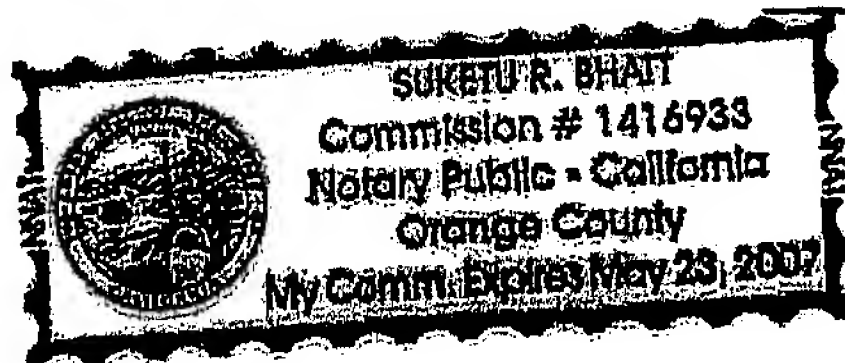
COUNTY OF Orange

) ss.

On 11/4/2003, before me, SUKETU R. BHATT, personally appeared Richard Burstein of Burstein Technologies, Inc., personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

[SEAL]



SUKETU R. BHATT  
Notary Public



**Schedule A**

**BTI List of Issued Patents, Published and Unpublished Applications**

**Issued Patents**

| <b>Title</b>                                                                                             | <b>Country</b> | <b>Patent No.</b> | <b>Issue Date</b> |
|----------------------------------------------------------------------------------------------------------|----------------|-------------------|-------------------|
| Apparatus and Method for Conducting Assays                                                               | New Zealand    | 335863            | 10/08/97          |
| Antiviral Liposome having Coupled Target-Binding Moiety and Hydrolytic Enzyme                            | U.S.           | 5,718,915         | 02/17/98          |
| Apparatus and Method for Carrying Out Analysis of Samples                                                | U.S.           | 5,892,577         | 04/06/99          |
| Laboratory in a Disk                                                                                     | Latvia         | 12469             | 09/14/99          |
| Laboratory in a Disk                                                                                     | Liberia        | 00015             | 09/27/99          |
| Antiviral Supramolecules Containing Target-Binding Molecules and Therapeutic Molecules Bound to Spectrin | U.S.           | 5,997,861         | 12/07/99          |
| Laboratory in a Disk                                                                                     | Singapore      | 57530             | 01/25/00          |
| Laboratory in a Disk                                                                                     | U.S.           | 6,030,581         | 02/29/00          |
| Laboratory in a Disk                                                                                     | Mongolia       | 1627              | 03/01/00          |
| Apparatus and Method for Carrying Out Analysis of Samples                                                | Australia      | 714662            | 04/20/00          |
| Laboratory in a Disk                                                                                     | Sri Lanka      | 11835             | 06/06/00          |
| Laboratory in a Disk                                                                                     | Lithuania      | 4681              | 07/25/00          |
| Laboratory in a Disk                                                                                     | Turkey         | 1999 02440        | 08/21/00          |
| Apparatus and Method for Conducting Assays                                                               | Singapore      | 65857             | 11/21/00          |
| Cleavable Signal Element Device and Method                                                               | New Zealand    | 333907            | 01/11/01          |
| Apparatus and Method for Conducting Assays                                                               | Australia      | 724660            | 01/25/01          |
| Cleavable Signal Element Device and Method                                                               | Australia      | 725065            | 01/25/01          |
| Cassette and Applicator for Biological and Chemical Sample Collection                                    | U.S.           | US 6,196,979 B1   | 03/06/01          |
| Laboratory in a Disk                                                                                     | Great Britain  | 2 337 113 B       | 03/21/01          |
| Laboratory in a Disc                                                                                     | Madagascar     | 00152             | 04/13/01          |
| Apparatus and Method for Carrying Out Analysis of Samples                                                | U.S.           | 6,256,088 B1      | 07/03/01          |
| Laboratory in a Disk                                                                                     | New Zealand    | 338017            | 07/12/01          |
| Gene Sequencer and Methods                                                                               | U.S.           | 6,274,373 B1      | 08/14/01          |
| Laboratory in a Disk                                                                                     | Slovenia       | 20346             | 09/07/01          |
| Gene Sequencer and Methods                                                                               | Singapore      | 67245             | 10/16/01          |
| Spatially Addressable, Cleavable Reflective Signal Elements, Assay Device and Method                     | U.S.           | 6,312,901 B2      | 11/06/01          |
| Cassette and Applicator for Biological and Chemical Sample Collection                                    | Taiwan         | NI-135871         | 11/07/01          |
| Apparatus and Semi-Reflective Optical System for Carrying Out Analysis of Samples                        | U.S.           | 6,327,031 B1      | 12/04/01          |
| Spatially Addressable, Cleavable Reflective Signal                                                       | U.S.           | 6,331,275 B1      | 12/18/01          |

*RA J.V.*

| Title                                                                                              | Country     | Patent No.      | Issue Date |
|----------------------------------------------------------------------------------------------------|-------------|-----------------|------------|
| Elements, Assay Device and Method                                                                  |             |                 |            |
| Gene Sequencer and Methods                                                                         | New Zealand | 337893          | 01/10/02   |
| Apparatus and Method for Carrying Out Analysis of Samples                                          | US          | 6,339,473 B1    | 01/15/02   |
| Optical Disk-Based Assay Devices and Methods                                                       | US          | 6,342,349 B1    | 01/29/02   |
| Laboratory in a Disk                                                                               | Australia   | 740195          | 02/14/02   |
| Liposome Having Attached Target-Binding Moiety and Artherosclerotic Plaque Interacting Moiety      | US          | 6,379,699 B1    | 04/30/02   |
| Gene Sequencer and Methods (div.)                                                                  | New Zealand | 512488          | 05/13/02   |
| Apparatus and Method for Carrying Out Analysis of Samples                                          | Canada      | 2,200,562       | 05/21/02   |
| Laboratory in a Disk                                                                               | St. Lucia   | GB 2 337 113 A  | 07/1/02    |
| Cleavable Signal Element Device and Method                                                         | Israel      | 127938          | 7/8/02     |
| Gene Sequencer and Methods                                                                         | Australia   | 745673          | 07/11/02   |
| Analytical Disc with Optically Trackable Encoded Information and Related Optical Inspection System | Australia   | 746419          | 08/15/02   |
| Monomolecular Adhesion Methods for Manufacturing Microfabricated Multiaminate Devices              | US          | US 6,503,359 B2 | 1/7/03     |
| Laboratory in a Disk                                                                               | Israel      | 131619          | 3/2/03     |
| Apparatus and Method for Conducting Assays                                                         | EP          | 0938382 B1      | 3/12/03    |
| Gene Sequencer and Method for Determining the Nucleotide Sequence of a Chromosome                  | US          | US 6,566,069 B2 | 5/20/03    |

#### Published Applications

| Title                                                                      | Country       | Publication No.  | Publication Date |
|----------------------------------------------------------------------------|---------------|------------------|------------------|
| Apparatus and Method for Carrying Out Analysis of Samples                  | PCT           | WO 96/09548      | 03/28/96         |
| Complementarily Bonded Two and Three-Dimensional Supramolecular Structures | PCT           | WO 96/13522      | 05/09/96         |
| Novel Therapeutic Binding Molecule-Enzyme Complexes                        | PCT           | WO 96/32841      | 10/24/96         |
| Cleavable Signal Element, Device and Method                                | PCT           | WO 98/01533      | 01/15/98         |
| Spatially Addressable Combinatorial Chemical Arrays in CD-ROM Format       | PCT           | WO 98/12559      | 02/26/98         |
| Apparatus and Method for Conducting Assays                                 | PCT           | WO 98/15356      | 04/16/98         |
| Gene Sequencer and Methods                                                 | PCT           | WO 98/37238      | 08/27/98         |
| Laboratory in a Disk                                                       | PCT           | WO 98/38610      | 09/03/98         |
| Laboratory in a Disk                                                       | Great Britain | GB 2337113A      | 11/10/99         |
| Laboratory in a Disk                                                       | Indonesia     | 022.965          | 12/23/99         |
| Optical Disk-Based Assay Devices and Methods                               | PCT           | WO 00/05582      | 02/03/00         |
| Laboratory in a Disk                                                       | Vietnam       | 143 Vol. A #2035 | 02/25/00         |
| Cassette and Applicator for Biological and Chemical Sample Collection      | PCT           | WO 00/10460      | 03/02/00         |
| Laboratory in a Disk                                                       | Czech         | 4-2000           | 04/12/00         |

*RB. C. C.*



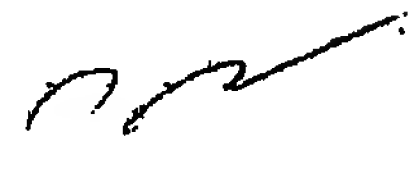
| Title                                                                                          | Country     | Publication No.               | Publication Date |
|------------------------------------------------------------------------------------------------|-------------|-------------------------------|------------------|
| Trackable Optical Discs with Concurrently Readable Analyte Material                            | PCT         | WO 00/26877                   | 05/11/00         |
| Laboratory in a Disk                                                                           | Mexico      | 05/00 Gazette                 | 09/08/00         |
| Laboratory in a Disk                                                                           | Hong Kong   | 00102314.5                    | 09/08/00         |
| Cleavable Signal Element, Device, and Method                                                   | Mexico      |                               |                  |
| Cleavable Signal Element, Device, and Method                                                   | New Zealand | Journal #1455                 | 09/29/00         |
| Methods and apparatus for Physically Patterning Nonoperational Structures of an Optical Disc   | PCT         | WO 01/15154                   | 03/01/01         |
| Optical Disk-Based Assay Devices and Methods                                                   | Europe      | 1097373                       | 05/09/01         |
| Cassette and Applicator for Biological and Chemical Sample Collection                          | Europe      | 1005039                       | 06/13/01         |
| Trackable Optical Discs with Concurrently Readable Analyte Material                            | Korea       | 2001-92427                    | 10/24/01         |
| Trackable Optical Discs with Concurrently Readable Analyte Material                            | Hong Kong   | 1035929A                      | 12/14/01         |
| Methods and Apparatus for Optical Disc Data Acquisition Using Physical Synchronization Markers | PCT         | WO 02/16037 A1                | 02/28/02         |
| Cassette and Applicator for Biological and Chemical Sample Collection                          | PH          | VOL IV-NO. 14<br>(pp 153-154) | 04/11/02         |
| Gene Sequencer and Method for Determining the Nucleotide Sequence of a Chromosome              | US          | US-2002-0045174-A<br>1        | 04/18/02         |
| Cassette and Applicator for Biological and Chemical Sample Collection                          | Argentina   | AR 02055A1                    | 05/02/02         |
| Disc Drive System and Methods for Use With Bio-Discs                                           | PCT         | WO 02/39446 A2                | 05/16/02         |
| Optical Biodiscs With Reflective Layers                                                        | PCT         | WO 02/41004 A2                | 05/23/02         |
| Apparatus and Methods for Separating Agglutinants and Disperse Particles                       | PCT         | WO 02/42780 A2                | 05/30/02         |
| Dual Bead Assays Including Optical Biodiscs and Methods Relating Thereto                       | PCT         | WO 02/42498 A2                | 05/30/02         |
| Apparatus and Methods for Separating Components of Particulate Suspension                      | PCT         | WO 02/43866 A2                | 06/06/02         |
| Methods and Apparatus for Detecting and Quantifying Lymphocytes with Optical Biodiscs          | PCT         | WO 02/44695                   | 06/06/02         |
| Optical Disc Assemblies for Assemblies for Performing Assays                                   | PCT         | WO 02/46762 A2                | 06/13/02         |
| Optical Discs for Measuring Analytes                                                           | PCT         | WO 02/46721 A2                | 06/13/02         |
| Methods for Detecting Analytes Using Optical Discs and Optical Disc Readers                    | PCT         | WO 02/46761 A2                | 06/13/02         |
| Multiple Data Layer Optical Discs for Detecting Analytes                                       | PCT         | WO 02/47071 A2                | 06/13/02         |
| Optical Disc Assemblies for Assemblies for Performing Assays                                   | US          | US-2002-<br>0071362-A1        | 06/13/02         |
| Methods for Detecting Analytes Using Optical Discs and Optical Disc Readers                    | US          | US-2002-<br>0071359-A1        | 06/13/02         |
| Apparatus and Methods for Separating Components of Particulate Suspension                      | US          | US-2002-0076354-A<br>1        | 06/20/02         |
| Detection System for Disc-Based Laboratory and Improved Optical Bio-Discs Including Same       | US          | US-2002-0076805-A<br>1        | 06/20/02         |
| Surface Assembly for Immobilizing DNA Capture Probes and Bead-Based Assay Including Optical    | PCT         | WO 02/051537 A2               | 07/04/02         |

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| Title                                                                                                                                                                                         | Country | Publication No.        | Publication Date |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------|------------------|
| Bio-Discs and Methods Relating Thereto                                                                                                                                                        |         |                        |                  |
| Optical Disc Analysis System Including Related Methods for Biological and Medical Imaging                                                                                                     | PCT     | WO 02/056311 A2        | 7/18/02          |
| Methods and Apparatus for Blood Typing with Optical Bio-Discs                                                                                                                                 | US      | US-2002-0098528-A<br>1 | 07/25/02         |
| Multiple Data Layer Optical Discs for Detecting Analytes                                                                                                                                      | US      | US-2002-0097658-A<br>1 | 07/25/02         |
| Methods and Apparatus for Patterning Nonoperational Structures on an Optical Disc                                                                                                             | Germany | DE 100 84 923 T1       | 07/25/02         |
| Methods and Apparatus for Blood Typing with Optical Bio-Discs                                                                                                                                 | PCT     | WO 02/059622 A1        | 08/01/02         |
| Interactive System for Analyzing Biological Samples and Processing Related Information and the Use Thereof                                                                                    | US      | US-2002-0118355-A<br>1 | 8/29/02          |
| Disc Drive System and Methods for Use with Bio-Discs                                                                                                                                          | US      | US-2002-0122564-A<br>1 | 09/05/02         |
| Methods for DNA Conjugation Onto Solid Phase Including Related Optical Biodiscs and Disc Drive Systems                                                                                        | PCT     | WO 02/068696 A2        | 09/06/02         |
| Methods for Decreasing Non-Specific Binding of Beads in Dual Bead Assays Including Related Optical Biodiscs and Disc Drive Systems                                                            | PCT     | WO 02/068697 A2        | 09/06/02         |
| Dual Bead Assays Using Cleavable Spacers and/or Ligation to Improve Specificity and Sensitivity Including Related Methods and Apparatus                                                       | PCT     | WO 02/073605 A2        | 09/19/02         |
| Use of Restriction Enzymes and Other Chemical Methods to Decrease Non-Specific Binding in Dual Bead Assays and Related Bio-Discs, Methods, and System Apparatus for Detecting Medical Targets | PCT     | WO 02/071929 A2        | 09/19/02         |
| Optical Discs for Measuring Analytes                                                                                                                                                          | US      | US-2002-0145960-A<br>1 | 10/10/02         |
| Multi-Parameter Assays Including Analysis Discs and Methods Relating Thereto                                                                                                                  | US      | US-2002-0151043-A<br>1 | 10/17/02         |
| Interactive System for Analyzing Biological Samples and Processing Related Information and the Use Thereof                                                                                    | PCT     | WO 02/084302           | 10/24/02         |
| Optical Biodiscs with Reflective Layer                                                                                                                                                        | US      | US-2002-0163642-A<br>1 | 11/07/02         |
| Surface Assembly for Immobilizing DNA Capture Probes and Bead-Based Assay Including Optical Bio-Discs and Methods Relating Thereto                                                            | US      | US-2002-0168652-A<br>1 | 11/14/02         |
| Methods for DNA Conjugation onto Solid Phase Including Related Optical Biodiscs and Disc Drive Systems                                                                                        | US      | US2002-0168663-A<br>1  | 11/14/02         |
| Methods for Decreasing Non-Specific Binding of Beads in Dual Bead Assays Including Related Optical Biodiscs and Disc Drive Systems                                                            | US      | US-2002-0172980-A<br>1 | 11/21/02         |
| Variable Sampling Control for Rendering Pixelization of Analysis Results in a Bio-Disc Assembly and Apparatus Relating Thereto                                                                | US      | US-2002-0171838-A<br>1 | 11/21/02         |
| Optical Disc Analysis System Including Related Methods for Biological and Medical Imaging                                                                                                     | US      | US-2002-0176342-A<br>1 | 11/28/02         |

AR

| Title                                                                                                                                                                                         | Country | Publication No.        | Publication Date |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------|------------------|
| Surface Assembly For Immobilizing DNA Capture Probes In Genetic Assays Using Enzymatic Reactions To Generate Signal In Optical Bio-Discs And Methods Relating Thereto                         | PCT     | WO 02/094991           | 11/28/02         |
| Methods and Apparatus for Analyzing Operational and Nonoperational Data Acquired from Optical Discs                                                                                           | PCT     | WO 02/095740           | 11/28/02         |
| Apparatus and Methods for Separating Agglutinants and Disperse Particles                                                                                                                      | US      | US-2002-0196435-A<br>1 | 12/26/02         |
| Dual Bead Assays Including Optical Biodiscs and Methods Relating Thereto                                                                                                                      | US      | US-2003-0003464-A<br>1 | 1/2/03           |
| Optical Disc Analysis System Including Related Methods for Biological and Medical Imaging                                                                                                     | PCT     | WO 03/007293           | 1/23/03          |
| Optical Analysis Disc and Related Drive Assembly for Performing Interactive Centrifugation                                                                                                    | PCT     | WO 03/009107           | 1/30/03          |
| Transmissive Optical Disc Assemblies for Performing Physical Measurements and Methods Relating Thereto                                                                                        | PCT     | WO 03/009010           | 1/30/03          |
| Magnetic Assisted Detection of Magnetic Beads Using Optical Disc Drives                                                                                                                       | PCT     | WO 03/010563           | 2/6/03           |
| Optical Disc System And Related Detecting And Decoding Methods For Analysis Of Microscopic Structures                                                                                         | US      | US-2003-0035352-A<br>1 | 2/20/03          |
| Methods for Qualitative and Quantitative Analysis of Cells and Related Optical Bio-Disc Systems                                                                                               | PCT     | WO 03/021223 A2        | 3/13/03          |
| Dual Bead Assays Using Cleavable Spacers and/or Ligation to Improve Specificity and Sensitivity Including Related Methods and Apparatus                                                       | US      | US-2003-0054376-A<br>1 | 3/20/03          |
| Nuclear Morphology Based Identification and Quantification of White Blood Cell Types Using Optical Bio-Disc Systems                                                                           | PCT     | WO 03/023354 A2        | 3/20/03          |
| Methods for Differential Cell Counts Including Related Apparatus and Software Performing Same                                                                                                 | PCT     | WO 03/023571 A2        | 3/20/03          |
| Surface Assembly For Immobilizing DNA Capture Probes In Genetic Assays Using Enzymatic Reactions To Generate Signal In Optical Bio-Discs And Methods Relating Thereto                         | US      | US-2003-0059803-A<br>1 | 3/27/03          |
| Optical Analysis Disc and Related Drive Assembly for Performing Interactive Centrifugation                                                                                                    | US      | US-2003-0064872-A<br>1 | 4/3/03           |
| Method and Apparatus for Bonded Fluidic Circuit for Optical Bio-Disc                                                                                                                          | PCT     | WO 03/027723 A2        | 4/3/03           |
| Dual Bead Assays Including Covalent Linkages for Improved Specificity and Related Optical Analysis Discs                                                                                      | US      | US-2003-0077598-A<br>1 | 4/24/03          |
| Transmissive Optical Disc Assemblies for Performing Physical Measurements and Methods Relating Thereto                                                                                        | US      | US-2003-0077627-A<br>1 | 4/24/03          |
| Use of Restriction Enzymes and Other Chemical Methods to Decrease Non-Specific Binding in Dual Bead Assays and Related Bio-Discs, Methods, and System Apparatus for Detecting Medical Targets | US      | US-2003-0082568-A<br>1 | 5/1/03           |
| Methods for Differential Cell Counts Including Related Apparatus and Software for Performing                                                                                                  | US      | US-2003-0096324-A<br>1 | 5/22/03          |

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| <b>Title</b>                                                                                                        | <b>Country</b> | <b>Publication No.</b> | <b>Publication Date</b> |
|---------------------------------------------------------------------------------------------------------------------|----------------|------------------------|-------------------------|
| Same                                                                                                                |                |                        |                         |
| Optical Bio-Discs and Fluidic Circuits for Analysis of Cells and Methods Relating Thereto                           | PCT            | WO 03/044481 A2        | 5/30/03                 |
| Methods and Apparatus for Blood Typing with Optical Bio-Discs                                                       | PCT            | WO 03/043403 A2        | 5/30/03                 |
| Magneto-Optical Bio-Discs and Systems Including Related Methods                                                     | PCT            | WO 03/046511 A2        | 6/5/03                  |
| Methods and Apparatus for Detecting and Quantifying Lymphocytes with Optical Biodiscs                               | US             | US-2003-0104486-A<br>1 | 6/5/03                  |
| Nuclear Morphology Based Identification and Quantification of White Blood Cell Types Using Optical Bio-Disc Systems | US             | US-2003-0113925-A<br>1 | 6/19/03                 |
| Methods for Qualitative and Quantitative Analysis of Cells and Related Optical Bio-Disc Systems                     | US             | US-2003-0129865-A<br>1 | 7/10/03                 |
| Adhesion Methods for Manufacturing Multilaminate Devices                                                            | US             | US-2003-0136509-A<br>1 | 7/24/03                 |
| Method and Apparatus for Visualizing Data                                                                           | PCT            | WO 03/060668 A2        | 7/24/03                 |
| Capture Layer Assemblies for Cellular Assays Including Related Optical Analysis Discs and Methods                   | US             | US-2003-0143637-A<br>1 | 7/31/03                 |
| Apparatus and Method for Carrying Out Analysis of Samples                                                           | EP             | 1338887 (A)            | 8/27/03                 |

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# US Provisional Applications

| BTI Code           | Title                                                                                                                                                                                             | Filing Date |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| BTI 96100401(USP)  | Assay Element and Device                                                                                                                                                                          | 7/8/96      |
| DEME 96100301(USP) | Spatially Addressable Combinatorial Chemical Arrays in CD-ROM Format                                                                                                                              | 9/20/96     |
| BTI 96100402(USP2) | Assay Method                                                                                                                                                                                      | 11/1/96     |
| BTI 97100501(USP)  | Gene Sequencer and Methods                                                                                                                                                                        | 2/21/97     |
| BTI 97100601(USP)  | Laboratory in a Disk                                                                                                                                                                              | 2/28/97     |
| BTI 96100405(USP3) | Spatially Addressable, Cleavable Signal Elements, Static and Continuous Assay Device and Methods                                                                                                  | 7/21/97     |
| BTI 98100803(USP)  | Trackable Optical Discs with Concurrently Readable Nonoperational Features for Clinical Immunoassay                                                                                               | 5/14/99     |
| BTI 99101001(USP)  | Methods and apparatus for Patterning Nonoperational Structures on an Optical Disc                                                                                                                 | 8/23/99     |
| BTI 99101201(USP)  | Methods and Apparatus for Optical Disc Data Acquisition Using Physical Synchronization Markers                                                                                                    | 8/23/99     |
| PROV-101           | Interactive Method and System for Analyzing Biological Samples and Processing Related Medical Information Using Specially Prepared Bio-Optical Disc, Optical Disc Drive, and Internet Connections | 11/8/00     |
| PROV-102           | Optical Disc Drive For Bio-Optical Disc                                                                                                                                                           | 11/9/00     |
| PROV-103           | Optical Disc Assembly for Performing Microscopy and Spectroscopy Using Optical Disc Drive                                                                                                         | 11/16/00    |
| PROV-104           | Methods, Systems and Apparatus Relating to Bio-Discs and Bio-Drives                                                                                                                               | 11/16/00    |
| PROV-107           | Clinical Diagnostic Optical Disc and Related Methods for Blood Typing, DNA Assays, and Molecular Analysis Including Processing Software                                                           | 11/17/00    |
| PROV-105           | Optical Bio-Disc Including Microfluidic Circuit for Separation and Quantification of Agglutinated Microparticles or Cells and Methods Relating Thereto                                            | 11/22/00    |
| PROV-106           | Bioactive Solid Phase for Specific Cell Capture and Optical Bio-Disc Including Same                                                                                                               | 11/22/00    |
| PROV-108           | Dual Bead Assays and Related Micro Disc Arrays for Use on Optical Disc                                                                                                                            | 11/27/00    |
| PROV-110           | Optical Disc Based Diagnostic Platform Including DNA Arrays and Dual Bead Assay Multiplexing                                                                                                      | 11/28/00    |
| PROV-109           | Microfluidic Circuit for Separating and Metering Fluid Components From a Particulate Suspension and Optical Bio-Disc and Drive Assembly Relating Thereto                                          | 12/1/00     |
| PROV-111           | Optical Disc Assembly for Performing Assays                                                                                                                                                       | 12/8/00     |
| PROV-112           | Optical Bio-Discs for Performing Measurements of Physical Specimens                                                                                                                               | 12/12/00    |
| PROV-114           | Detection System for Disk-Based Laboratory and Improved Optical Bio-Disc Including Same                                                                                                           | 12/15/00    |
| PROV-113           | Surface Assembly for Immobilizing DNA Capture Probes and Bead-Based Assay Including Optical Bio-Discs and Methods Relating Thereto                                                                | 12/22/00    |
| PROV-118           | Device and Methods for Performing Qualitative and Quantitative Analysis on an Optical Disc Platform                                                                                               | 1/4/01      |
| PROV-115           | Methods and Apparatus for Detecting Investigational                                                                                                                                               | 1/11/01     |

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| BTI Code  | Title                                                                                                                                                      | Filing Date |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|           | Features on a Surface of an Optical Disc Assembly                                                                                                          |             |
| PROV-119  | Disklab Diagnostic Platform                                                                                                                                | 1/18/01     |
| PROV-116A | Signal Processing Apparatus and Methods for Obtaining Signal Signatures of Investigational Features Detected on a Surface of an Optical Disc Assembly      | 2/20/01     |
| PROV-125  | Methods for Attaching Capture DNA and Reporter DNA to Solid Phase Including Selection of Bead Types as Solid Phase                                         | 2/27/01     |
| PROV-128  | Reduction of Non-Specific Binding in Dual Bead Assays by Selection of Bead Type and Bead Treatment                                                         | 2/28/01     |
| PROV-131  | Mixing Methods to Reduce Non-Specific Binding in Dual Bead Assays                                                                                          | 2/28/01     |
| PROV-132  | Dual Bead Assays Including Linkers to Reduce Non-Specific Binding                                                                                          | 3/1/01      |
| PROV-137  | Biological Assays Using Dual Bead Multiplexing Including Optical Bio-Disc and Related Methods                                                              | 3/1/01      |
| PROV-129  | Reduction of Non-Specific Binding in Dual Bead Assays by Selection of Buffer Conditions and Wash Conditions                                                | 3/12/01     |
| PROV-136  | Surface Assembly for Immobilizing Capture Agents and Dual Bead Assays Including Optical Bio-Disc and Methods Relating Thereto                              | 3/14/01     |
| PROV-126  | Methods of Conjugation for Attaching Capture DNA and Reporter DNA to Solid Phase                                                                           | 3/22/01     |
| PROV-133  | Dual Bead Assays Including Use of Restriction Enzymes to Reduce Non-Specific Binding                                                                       | 3/23/01     |
| PROV-134  | Dual Bead Assays Including Use of Chemical Methods to Reduce Non-Specific binding                                                                          | 3/23/01     |
| PROV-127  | Use of Double Stranded DNA for Attachment to Solid Phase to Reduce Non-Covalent Binding                                                                    | 3/26/01     |
| PROV-130  | Reduction of Non-Specific Binding of Dual Bead Assays by Use of Blocking Agents                                                                            | 3/26/01     |
| PROV-135  | Dual Bead Assays for Detecting Medical Targets                                                                                                             | 3/26/01     |
| PROV-138  | Dual Bead Assays Using Cleavable Spacers to Improve Specificity and Sensitivity                                                                            | 3/26/01     |
| PROV-139  | Improved Dual Bead Assays Using Ligation                                                                                                                   | 3/26/01     |
| PROV-146  | Multi-Parameter Assay Apparatus                                                                                                                            | 4/11/01     |
| PROV-170  | Variable Sampling Control For Rendering Pixelation of Analysis Results In Optical Bio-Disc Assembly And Apparatus Relating Thereto                         | 5/16/01     |
| PROV-116B | Signal Processing Apparatus and Methods for Obtaining Signal Signatures of Investigational Features Detected on a Surface of an Optical Disc Assembly      | 5/18/01     |
| PROV-165A | Surface Assembly for Immobilizing DNA Capture Probes Using Pellets as Reporters in Genetic Assays Including Optical Bio-Discs and Methods Relating Thereto | 5/18/01     |
| PROV-102B | Disc Drive Assembly For Optical Bio-Discs                                                                                                                  | 5/22/01     |
| PROV-177  | Optical Discs and Assemblies for Detection of Microscopic Structures Using Focal Zone Control                                                              | 5/24/01     |
| PROV-111B | Optical Disc Assembly for Performing Assays                                                                                                                | 5/29/01     |
| PROV-112B | Optical Bio-Discs for Performing Measurements of Physical Specimens                                                                                        | 5/29/01     |
| PROV-216  | Clinical Diagnostic Optical Bio-Disc And Related Methods                                                                                                   | 7/3/01      |

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| BTI Code  | Title                                                                                                                                                                   | Filing Date |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|           | For Selection And Detection Of Lymphocytes Including Helper-Inducer/Suppressor-Cytotoxic Cells                                                                          |             |
| PROV-177B | Optical Discs and Assemblies for Detection of Microscopic Structures Using Focal Zone Control                                                                           | 7/6/01      |
| PROV-218  | Optical Disc System and Related Decoding Methods for Detecting Microscopic Structures                                                                                   | 7/10/01     |
| PROV-217  | Optical Disc System for Detecting Microscopic Structures and Methods Relating Thereto                                                                                   | 7/12/01     |
| PROV-219  | Multi-Purpose Optical Analysis Disc for Conducting Assays and Various Reporting Agents for Use Therewith                                                                | 7/12/01     |
| PROV-220A | Quantitative and Qualitative Methods for Cell Isolation and Typing Including Immunophenotyping                                                                          | 7/17/01     |
| PROV-221A | Capture Layer Assemblies and Optical Bio-Discs for Immunophenotyping                                                                                                    | 7/17/01     |
| PROV-112C | Optical Bio-Discs for Performing Measurements of Physical Specimens                                                                                                     | 7/18/01     |
| PROV-124  | Transmissive Optical Disc Assemblies for Performing Physical Measurements and Methods Relating Thereto                                                                  | 7/19/01     |
| PROV-222A | Methods for Imaging Blood cells, Blood-Borne Parasites and Pathogens, and Other Biological Matter Including Related Optical Bio-Discs and Drive Assemblies              | 7/19/01     |
| PROV-179  | Optical Disc Including Zones to Control Acquisition of Signals from Investigational Features Located Thereon                                                            | 7/20/01     |
| PROV-214  | Optical Analysis Disc and Related Drive Assembly for Performing Interactive Centrifugation                                                                              | 7/20/01     |
| PROV-236  | Methods For Using Different Sized Reporter Beads With Multiple Combinations Of Ligands And Receptors To Generate Distinct Diagnostic Signals In Optical Bio-Disc System | 7/20/01     |
| PROV-220B | Quantitative and Qualitative Methods for Cell Isolation and Typing Including Immunophenotyping                                                                          | 7/23/01     |
| PROV-221B | Capture Layer Assemblies and Optical Bio-Discs for Immunophenotyping                                                                                                    | 7/23/01     |
| PROV-222B | Methods for Imaging Blood cells, Blood-Borne Parasites and Pathogens, and Other Biological Matter Including Related Optical Bio-Discs and Drive Assemblies              | 7/23/01     |
| PROV-223A | Optical Analysis Discs Including Fluidic Circuits for Optical Imaging and Quantitative Evaluation of Blood Cells Including Lymphocytes                                  | 7/23/01     |
| PROV-224A | Methods for Differential Cell Counts Including Leukocytes and Use of Optical Bio-Disc for Performing Same                                                               | 7/24/01     |
| PROV-225A | Optical Analysis Discs Including Microfluidic Circuits for Performing Cell Counts                                                                                       | 7/24/01     |
| PROV-237  | Bonded Fluidic Circuit for Optical Bio-Disc                                                                                                                             | 7/24/01     |
| PROV-238  | Magnetic Assisted Detection of Magnetic Beads Using Optical Disc Drives                                                                                                 | 7/24/01     |
| PROV-226A | Methods for Reducing Non-Specific Binding of Cells on Optical Bio-Discs Utilizing Charged Matter Including Heparin, Plasma, or Poly-L-lysine                            | 7/25/01     |
| PROV-227A | Methods for Reducing Non-Specific Binding of Cells on Optical Bio-Discs Utilizing Blocking Agents                                                                       | 7/25/01     |
| PROV-235A | Methods for Reducing Bubbles in Fluidic Chambers Using                                                                                                                  | 7/25/01     |

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7/25/01

| BTI Code  | Title                                                                                                                                                                                       | Filing Date |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|           | Polyvinyl Alcohol and Related Techniques for Achieving Same in Optical Bio-Discs                                                                                                            |             |
| PROV-228A | Sealing Methods for Containment of Hazardous Biological Materials within Optical Analysis Disc Assemblies                                                                                   | 7/27/01     |
| PROV-229A | Methods for Calculating Qualitative and Quantitative Ratios of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Optical Bio-Disc Platform                                            | 7/27/01     |
| PROV-230A | Quantitative and Qualitative Methods for Characterizing Cancerous Blood Cells Including Leukemic Blood Samples Using Optical Bio-Disc Platform                                              | 7/27/01     |
| PROV-231A | Methods for Quantitative and Qualitative Characterization of Cancerous Blood Cells Including Lymphoma Blood Samples Using Optical Bio-Disc Platform                                         | 8/15/01     |
| PROV-232A | Methods for Specific Cell Capture by Off-Site Incubation of Primary Antibodies with Sample and Subsequent Capture by Surface-Bound Secondary Antibodies and Optical Bio-Disc Including Same | 8/20/01     |
| PROV-233A | RBC Lysis Protocol Evaluations of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Whole Blood and Related Optical Bio-Disc                                                          | 8/20/01     |
| PROV-234A | RBC Sieving Protocol Evaluations of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Whole Blood and Related Optical Bio-Disc                                                        | 8/20/01     |
| PROV-165B | Surface Assembly for Immobilizing DNA Capture Probes in Genetic Assays Using Enzymatic Reactions to Generate Signal in Optical Bio-Discs and Methods Relating Thereto                       | 8/21/01     |
| PROV-136B | Surface Assembly for Immobilizing Capture Agents and Dual Bead Assays Including Optical Bio-Disc and Methods Relating Thereto                                                               | 8/24/01     |
| PROV-220C | Quantitative and Qualitative Methods for Cell Isolation and Typing Including Immunophenotyping                                                                                              | 8/30/01     |
| PROV-221C | Capture Layer Assemblies and Optical Bio-Discs for Immunophenotyping                                                                                                                        | 8/31/01     |
| PROV-222C | Methods for Imaging Blood cells, Blood-Borne Parasites and Pathogens, and Other Biological Matter Including Related Optical Bio-Discs and Drive Assemblies                                  | 9/7/01      |
| PROV-223B | Optical Analysis Discs Including Fluidic Circuits for Optical Imaging and Quantitative Evaluation of Blood Cells Including Lymphocytes                                                      | 9/11/01     |
| PROV-224B | Methods for Differential Cell Counts Including Leukocytes and Use of Optical Bio-Disc for Performing Same                                                                                   | 9/12/01     |
| PROV-225B | Optical Analysis Discs Including Microfluidic Circuits for Performing Cell Counts                                                                                                           | 9/14/01     |
| PROV-226B | Methods for Reducing Non-Specific Binding of Cells on Optical Bio-Discs Utilizing Charged Matter Including Heparin, Plasma, or Poly-Lysine                                                  | 9/17/01     |
| PROV-177C | Optical Discs and Assemblies for Detection of Microscopic Structures Using Focal Zone Control                                                                                               | 9/19/01     |
| PROV-227B | Methods for Reducing Non-Specific Binding of Cells on Optical Bio-Discs Utilizing Blocking Agents                                                                                           | 9/20/01     |
| PROV-235B | Methods for Reducing Bubbles in Fluidic Chambers Using Polyvinyl Alcohol and Related Techniques for Achieving                                                                               | 9/24/01     |

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| BTI Code  | Title                                                                                                                                                                                       | Filing Date |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|           | Same in Optical Bio-Discs                                                                                                                                                                   |             |
| PROV-228B | Sealing Methods for Containment of Hazardous Biological Materials within Optical Analysis Disc Assemblies                                                                                   | 10/3/01     |
| PROV-229B | Methods for Calculating Qualitative and Quantitative Ratios of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Optical Bio-Disc Platform                                            | 10/10/01    |
| PROV-230B | Quantitative and Qualitative Methods for Characterizing Cancerous Blood Cells Including Leukemic Blood Samples Using Optical Bio-Disc Platform                                              | 10/19/01    |
| PROV-231B | Methods for Quantitative and Qualitative Characterization of Cancerous Blood Cells Including Lymphoma Blood Samples Using Optical Bio-Disc Platform                                         | 10/19/01    |
| PROV-260  | Segmented Area Detector for BioDrive and Methods Relating Thereto                                                                                                                           | 10/24/01    |
| PROV-232B | Methods for Specific Cell Capture by Off-Site Incubation of Primary Antibodies with Sample and Subsequent Capture by Surface-Bound Secondary Antibodies and Optical Bio-Disc Including Same | 10/26/01    |
| PROV-220D | Quantitative and Qualitative Methods for Cell Isolation and Typing Including Immunophenotyping                                                                                              | 11/7/01     |
| PROV-226C | Methods for Reducing Non-Specific Binding of Cells on Optical Bio-Discs Utilizing Charged Matter Including Heparin, Plasma, or Poly-Lysine                                                  | 11/9/01     |
| PROV-220E | Quantitative and Qualitative Methods for Cell Isolation and Typing Including Immunophenotyping                                                                                              | 11/13/01    |
| PROV-221D | Capture Layer Assemblies and Optical Bio-Discs for Immunophenotyping                                                                                                                        | 11/14/01    |
| PROV-229C | Methods for Calculating Qualitative and Quantitative Ratios of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Optical Bio-Disc Platform                                            | 11/30/01    |
| PROV-261  | Optical Disc Analysis System Including Related Signal Processing Methods and Software                                                                                                       | 1/14/02     |
| PROV-234B | RBC Sieving Protocol Evaluations of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Whole Blood and Related Optical Bio-Disc                                                        | 1/17/02     |
| PROV-233B | RBC Lysis Protocol Evaluations of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Whole Blood and Related Optical Bio-Disc                                                          | 1/18/02     |
| PROV-262A | Methods of Chemistry Deposition for Colorimetric and Fluorescent Assays as Implemented on Optical Analysis Discs                                                                            | 1/22/02     |
| PROV-272  | Biosafe Optical Analysis Disc                                                                                                                                                               | 1/24/02     |
| PROV-262B | Methods of Chemistry Deposition for Colorimetric and Fluorescent Assays as Implemented on Optical Analysis Discs                                                                            | 1/25/02     |
| PROV-260B | Segmented Area Detector for BioDrive and Methods Relating Thereto                                                                                                                           | 1/28/02     |
| PROV-265A | Data Capture and Signal Processing for Colorimetric and Fluorescent Assays as Implemented on Transmissive Optical Analysis Discs                                                            | 1/28/02     |
| PROV-273  | Biosafe Optical Disc Tray for Use with Disc Drive                                                                                                                                           | 1/28/02     |
| PROV-263A | Sample Preparation for Colorimetric and Fluorescent                                                                                                                                         | 1/29/02     |

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| BTI Code   | Title                                                                                                                          | Filing Date |
|------------|--------------------------------------------------------------------------------------------------------------------------------|-------------|
|            | Assays as Implemented on Optical Analysis Discs                                                                                |             |
| PROV-264A  | Sample Preparation for Colorimetric and Fluorescent Assays as Implemented on Optical Analysis Discs                            | 1/29/02     |
| PROV-268A  | Methods and Related Apparatus for Evaluation of Chromogens for Use on Optical Bio-Disc                                         | 1/29/02     |
| PROV-275   | Optical Discs Including Equi-Radial and/or Spiral Analysis Zones and Related Disc Drive Systems and Methods                    | 1/29/02     |
| PROV-277   | Methods and Apparatus for Blood Separation on Compact Bio-Disc                                                                 | 1/29/02     |
| PROV-136C  | Surface Assembly for Immobilizing Capture Agents and Dual Bead Assays Including Optical Bio-Disc and Methods Relating Thereto  | 1/30/02     |
| PROV-199A  | Optical Disc Device for Immunochemical Quantification of Analytes in Biological Fluids                                         | 1/30/02     |
| PROV-200A  | Capture Layer Assemblies Including Metal Layer for Immobilization of Receptor Molecules and Related Optical Assay Discs        | 1/30/02     |
| PROV-201A  | Capture Layer Assemblies Including Polymer Substrates for Immobilization of Receptor Molecules and Related Optical Assay Discs | 1/30/02     |
| PROV-260C  | Segmented Area Detector for BioDrive and Methods Relating Thereto                                                              | 1/30/02     |
| PROV-266A  | Methods and Apparatus for Separation of Lipoproteins Using Membranes on Optical Bio-Discs                                      | 1/30/02     |
| PROV-267A  | Methods and Apparatus for Use of Undiluted Samples in Colorimetric Assays Performed on Optical Analysis Discs                  | 1/30/02     |
| PROV-281   | Use of DVD Drive in a Fluorescence Detection Systems Including Related Optical Analysis Discs                                  | 1/30/02     |
| PROV-107X1 | Methods and Apparatus for Blood Typing with Optical Bio-Discs                                                                  | 1/31/02     |
| PROV-224C  | Methods for Differential Cell Counts Including Leukocytes and Use of Optical Bio-Disc for Performing Same                      | 1/31/02     |
| PROV-271   | Bio-Safe Dispenser and Optical Analysis Disc Assembly                                                                          | 1/31/02     |
| PROV-276   | Colorimetric Assays Implemented on Optical Analysis Discs                                                                      | 1/31/02     |
| PROV-278   | Membrane Assays Implemented On Optical Analysis Disc                                                                           | 1/31/02     |
| PROV-279   | Bead Assays Implemented on Optical Analysis Discs                                                                              | 1/31/02     |
| PROV-280   | Luminescence Assays Implemented on Optical Analysis Discs                                                                      | 1/31/02     |
| PROV-282   | Manufacturing Process for Optical Analysis Discs Including Successive Patterning Operations                                    | 1/31/02     |
| PROV-283   | Processes for Manufacturing Optical Analysis Discs with Molded Microfluidic Structures and Discs Made According Thereto        | 1/31/02     |
| PROV-285   | Microfluidic Structures with Circumferential Grooves for Bonding Adhesives and Related Optical Analysis Discs                  | 1/31/02     |
| PROV-290A  | Optical Bio-Disc Membrane Quantification Apparatus and Methods Using Control Lines as Internal Standard                        | 1/31/02     |
| PROV-291A  | Blood Separation Transfer Pipette for Use with Analysis Systems                                                                | 1/31/02     |

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| BTI Code  | Title                                                                                                                                                    | Filing Date |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| PROV-292  | Methods And Apparatus For Separation Of Blood Using Membranes On Optical Bio-Discs                                                                       | 1/31/02     |
| PROV-293  | Bio-Safety Features For A Bio Optical Disc and Disc Including Same                                                                                       | 1/31/02     |
| PROV-294  | Methods for Triggering Through Interrupted Grooves and Related Optical Analysis Discs and Systems                                                        | 1/31/02     |
| PROV-296  | Methods for Quantitation and Multiplexing of Receptor Ligand Assay by Use of Ultra Thin Biomembranes Including Modified Optical Disc and Drive           | 1/31/02     |
| PROV-298  | Algorithms For Absolute T-Lymphocytes and Ratio From Optical Bio-Disc                                                                                    | 1/31/02     |
| PROV-299  | Synthesis of Microparticles for Use in Disc Assays and Optical Analysis Disc Including Same                                                              | 1/31/02     |
| PROV-284  | Valving Control by Flexible Membrane in a Centrifugal Device and Related Optical Analysis Disc                                                           | 2/4/02      |
| PROV-286  | Size Sorting Mechanism by Flexible Membrane in a Centrifugal Device and Related Optical Analysis Disc Including Same                                     | 2/4/02      |
| PROV-288  | Mixing Process by Density Differential in a Centrifugal Device and Related Optical Analysis Disc Including Same                                          | 2/4/02      |
| PROV-295  | Use of Avidin-Biotin Systems for Increase Detection Sensitivity in Membrane Based Assays and Related Optical Analysis Disc                               | 2/4/02      |
| PROV-297  | Application Methods For Bio-Membrane Assays In Bio-Disc System and Optical Analysis Disc Made According Thereto                                          | 2/4/02      |
| PROV-300  | Microfluidic Circuits for Promoting Fluid Movement Including Use of Expanding Chambers and Gas Pistons and Related Optical Analysis Discs Including Same | 2/4/02      |
| PROV-302  | Detection Of Pits By Differential Phase Contrast in Transmission                                                                                         | 2/5/02      |
| PROV-303  | Safety Channels in Optical Disc Containing Microfluidic Channels                                                                                         | 2/5/02      |
| PROV-304  | Use of Duplicate Reactive Sites in Assay Device and Optical Analysis Disc Including Same                                                                 | 2/5/02      |
| PROV-305  | Cluster Designation Assays Performed on Optical Bio-Disc Including Equi-Radial Analysis Zones                                                            | 2/5/02      |
| PROV-260D | Segmented Area Detector for BioDrive and Methods Relating Thereto                                                                                        | 2/7/02      |
| PROV-301  | Sample Application Ports And Channels For Rotating Disc In Vitro Diagnostics Device And Optical Analysis Disc Including Same                             | 2/7/02      |
| PROV-298B | Methods And Apparatus For Calculating Absolute T-Lymphocyte Counts And Ratios From Optical Bio-Disc                                                      | 2/8/02      |
| PROV-289  | Manufacturing Process And Apparatus For Bio-Assay Disc Including Multi-Layer Die-Cut Adhesives And Clear Plastic Windows                                 | 2/11/02     |
| PROV-309  | Bio-Disc and Bio-Drive Analyser System Including Methods Relating Thereto                                                                                | 2/13/02     |
| PROV-260E | Segmented Area Detector for BioDrive and Methods Relating Thereto                                                                                        | 2/14/02     |
| PROV-287  | Manufacturing Process for Making Microfluidic Structures                                                                                                 | 2/14/02     |

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| BTI Code    | Title                                                                                                                            | Filing Date |
|-------------|----------------------------------------------------------------------------------------------------------------------------------|-------------|
|             | in Compact Bio-Disc and Disc Assembly Made According Thereto                                                                     |             |
| PROV-305B   | Cluster Designation Assays Performed on Optical Bio-Disc Including Equi-Radial Analysis Zones                                    | 2/19/02     |
| PROV-312    | Determination of Cell Counting Area                                                                                              | 2/19/02     |
| PROV-313    | Multi-Use Mapping of a BCD                                                                                                       | 2/19/02     |
| PROV-310    | Optical Systems for Membrane Assay Detection                                                                                     | 2/20/02     |
| PROV-311    | Optical Systems for Barcode Reading in an Optical Storage Device                                                                 | 2/20/02     |
| PROV-310B   | Optical Systems for Membrane Assay Detection                                                                                     | 2/21/02     |
| PROV-317    | Cardiac Marker Assays Performed on Optical Bio-Discs Including Related Apparatus and Methods                                     | 2/25/02     |
| PROV-224D   | Methods for Differential Cell Counts Including Leukocytes and Use of Optical Bio-Disc for Performing Same                        | 3/12/02     |
| PROV-318    | Methods and Apparatus for Separating Whole Blood Components in an Optical Bio-Disc Analysis Chamber for Use in Biomedical Assays | 3/18/02     |
| PROV-309B   | Bio-Disc and Bio-Drive Analyser System Including Methods Relating Thereto                                                        | 4/11/02     |
| PROV-307    | Cytometric Biolab-Disc                                                                                                           | 4/19/02     |
| PROV-308    | Micro-Cytometer System for Use with Cytometric Biolab-Disc                                                                       | 4/19/02     |
| PROV-290B   | Optical Bio-Disc Membrane Quantification Apparatus and Methods Using Control Lines as Internal Standard                          | 4/22/02     |
| PROV-319    | Radial Membrane Assays and Related Optical Analysis Discs and Drive Systems                                                      | 4/24/02     |
| PROV-107X1B | Methods and Apparatus for Blood Typing with Optical Bio-Discs                                                                    | 4/25/02     |
| PROV-107X1C | Methods and Apparatus for Hematologic Analysis with Optical Bio-Discs                                                            | 5/09/02     |
| PROV-320    | Methods For Isolation Of T-Lymphocytes For Use In Differential Cell Counting And Use Of Optical Bio-Disc For Performing Same     | 5/22/02     |
| PROV-321    | Methods For Calculating Specific Populations Of Cells Captured In An Optical Bio-Disc                                            | 5/22/02     |
| PROV-263B   | Sample Preparation for Colorimetric and Fluorescent Assays as Implemented on Optical Analysis Discs                              | 5/23/02     |
| PROV-322    | Methods and Apparatus for Use in Detection and Quantitation of Cell Populations and Use of Optical Bio-Disc for Performing Same  | 5/24/02     |
| PROV-323    | Optical Disc Systems for Determining the Concentration of Cells or Particles in a Sample and Methods Relating Thereto            | 5/30/02     |
| PROV-266B   | Methods And Apparatus For Separation Of Lipoproteins Using Membranes On Optical Bio-Discs                                        | 5/31/02     |
| PROV-267B   | Methods And Apparatus For Use Of Undiluted Samples In Colorimetric Assays Performed On Optical Analysis Discs                    | 5/31/02     |
| PROV-324    | Biomagnetic Assays and Related Optical Bio-Disc Systems                                                                          | 6/12/02     |
| PROV-199B   | Optical Disc Device for Immunochemical Quantification of Analytes in Biological Fluids                                           | 6/20/02     |
| PROV-200B   | Capture Layer Assemblies Including Metal Layer for                                                                               | 6/26/02     |

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| BTI Code  | Title                                                                                                                            | Filing Date |
|-----------|----------------------------------------------------------------------------------------------------------------------------------|-------------|
|           | Immobilization of Receptor Molecules and Related Optical Assay Discs                                                             |             |
| PROV-325  | Chromatographic Analysis on Optical Bio-Discs and Methods Relating Thereto                                                       | 7/16/02     |
| PROV-327  | Optical Bio-Disc Cell Sorter and Analyser                                                                                        | 7/25/02     |
| PROV-328  | Optical Disc Having Graded Reflective Layer Including Related Assays and Processing Systems                                      | 7/31/02     |
| PROV-333  | Methods for Adjusting Signal Recognition Algorithms on an Optical Analysis Disc Using Signal Deviation or Duration               | 7/31/02     |
| PROV-334  | Sealing System for Orifice Using Adhesive Films and Release Liner                                                                | 8/7/02      |
| PROV-326  | Quantification of Absolute Human CD4+ and CD8+ T Lymphocytes from Whole Blood By Colorimetric Methods in Bio-Disc System         | 8/15/02     |
| PROV-201B | Capture Layer Assemblies Including Polymer Substrates for Immobilizing of Receptor Molecules and Related Optical Assay Discs     | 8/21/02     |
| PROV-224E | Methods for Differential Cell Counts Including Related Apparatus and Software for Performing Same                                | 8/21/02     |
| PROV-309C | Bio-Disc and Bio-Disc Analyser System Including Methods Relating Thereto                                                         | 9/4/02      |
| PROV-329  | Methods for Anti-Counterfeiting Optical Discs and Related Security Features                                                      | 9/17/02     |
| PROV-330  | Methods for Male Fertility Evaluation Using Optical Bio-Disc Systems                                                             | 9/18/02     |
| PROV-332  | Optical Disc Assembly Including Reusable Platen and Disposable Substrate Member                                                  | 9/18/02     |
| PROV-331  | Reflective Optical Disc Having Distal Members for Enhancing Return Signal Strength                                               | 9/19/02     |
| PROV-276B | Colorimetric Assays Implemented On Optical Analysis Discs                                                                        | 9/24/02     |
| PROV-335  | Methods for Calculating Sub-Populations of White Blood Cells from a Blood Sample and Related Optical Bio-Disc Systems            | 9/24/02     |
| PROV-278B | Membrane Assays Implemented on Optical Analysis Disc                                                                             | 9/25/02     |
| PROV-279B | Bead Assays Implemented on Optical Analysis Discs                                                                                | 9/26/02     |
| PROV-280B | Luminescence Assays Implemented on Optical Analysis Discs                                                                        | 10/1/02     |
| PROV-262C | Methods of Chemistry Deposition for Colorimetric and Fluorescent Assays as Implemented on Optical Analysis Discs                 | 10/9/02     |
| PROV-268B | Methods and Related Apparatus for Evaluation of Chromagens for Use on Optical Bio-Discs                                          | 10/10/02    |
| PROV-264B | Data Capture and Signal Processing for Colorimetric and Fluorescent Assays as Implemented on Reflective Optical Analysis Discs   | 10/15/02    |
| PROV-265B | Data Capture and Signal Processing for Colorimetric and Fluorescent Assays as Implemented on Transmissive Optical Analysis Discs | 10/16/02    |
| PROV-336  | Parallel Flow Microfluidic Circuits for Use in Assays Including Related Optical Bio-Discs                                        | 10/24/02    |

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| BTI Code  | Title                                                                                                                     | Filing Date |
|-----------|---------------------------------------------------------------------------------------------------------------------------|-------------|
| PROV-337  | Methods for Programming and Compiling Executable Psuedocode to Enable Interaction Between Disc Drive System and Bio-Discs | 11/14/02    |
| PROV-338  | Improved Cell Counting Methods and Related Drive System and Bio-Discs                                                     | 2/18/03     |
| PROV-325B | Optical Disc Based Cation Exchange Linked Immunoassay (CELIA) and Methods Relating Thereto                                | 2/21/03     |
| PROV-339  | Cell Selection Through Multiple Markers in a Bio-Disc                                                                     | 3/3/03      |
| PROV-263C | Sample Preparation for Colorimetric and Fluorescent Assays as Implemented on Optical Analysis Discs                       | 3/5/03      |
| PROV-340  | Method of Separating Whole Blood on a Bio-Compact Disc                                                                    | 3/12/03     |
| PROV-284B | Valving Control by Flexible Membrane in Centrifugal Device and Related Optical Analysis Disc                              | 3/17/03     |
| PROV-325C | Optical Bio-Discs Including Spiral Fluidic Circuits for Performing Assays                                                 | 4/23/03     |
| PROV-341  | Fluidic Circuits for Sample Preparation Including Bio-Discs and Methods Relating Thereto                                  | 6/19/03     |
| PROV-267C | Fluidic Circuits, Methods and Apparatus for Use of Whole Blood Samples in Colorimetric Assays                             | 6/27/03     |
| PROV-277B | Methods and Apparatus for Blood Separation and Analysis Using Membranes on an Optical Disc                                | 7/15/03     |
| PROV-341B | Fluidic Circuits for Sample Preparation Including Bio-Discs and Methods Relating Thereto                                  | 7/25/03     |

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**U.S Unpublished Applications**

| <b>BTI Code</b> | <b>Title</b>                                                                                                                   | <b>Filing Date</b> |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------|
| UU-1            | Analytical Disc with Optically Trackable Encoded Information and Related Optical Inspection System                             | 8/21/00            |
| UU-2            | Apparatus and Method for Carrying Out Histological Analysis of Specimens                                                       | 9/20/00            |
| UU-3            | Apparatus and Method for Carrying Out Analysis of Samples Using Radiation Detector Output Ratios                               | 11/16/01           |
| UU-4            | Apparatus and Method for Carrying Out Analysis of Samples Using Split Beam Radiation Inspection                                | 11/16/01           |
| UU-5            | Apparatus and Method for Conducting Samples                                                                                    | 6/11/99            |
| UU-6            | Spatially Addressable Combinatorial Chemical Arrays in CD-ROM Format                                                           | 3/18/99            |
| UU-7            | Spatially Addressable, Cleavable Reflective Signal Elements, Assay Device and Method                                           | 10/12/01           |
| UU-8            | Optical Disk-Based Assay Devices and Methods                                                                                   | 7/23/01            |
| UU-9            | Gene Sequencer and Methods                                                                                                     | 5/21/01            |
| UU-10           | Cassette and Applicator for Biological and Chemical Sample Collection                                                          | 2/20/01            |
| UU-11           | Trackable Optical Discs with Concurrently Readable Analyte Material                                                            | 10/26/99           |
| UU-12           | Trackable Optical Discs with Concurrently Readable Nonoperational Structures                                                   | 5/5/00             |
| UU-13           | Methods and Apparatus for Patterning Nonoperational Structures on an Optical Disc                                              | 8/21/00            |
| UU-14           | Methods and Apparatus for Analyzing Operational and Nonoperational Data Acquired from Optical Discs                            | 8/23/99            |
| UU-15           | Methods and Apparatus for Optical Disc Data Acquisition Using Physical Synchronization Markers                                 | 8/21/00            |
| UU-16           | Supramolecule for Therapeutic Binding Molecule Complexes                                                                       | 3/25/02            |
| UU-17           | Variable Sampling Control for Rendering Pixelization of Analysis Results in a Bio-Disc Assembly and Apparatus Relating Thereto | 5/16/02            |
| UU-18           | Multi-Purpose Optical Analysis Optical Bio-Disc for Conducting Assays and Various Reporting Agents for Use Therewith           | 7/12/02            |
| UU-19           | Method and Apparatus for Bonded Fluidic Circuit for Optical Bio-Disc                                                           | 7/24/02            |
| UU-20           | Magnetic Assisted Detection of Magnetic Heads Using Optical Disc Drives                                                        | 7/24/02            |
| UU-21           | Segmented Area Detector for Biodrive and Methods Relating Thereto                                                              | 10/24/02           |
| UU-22           | Optical Bio-Discs and Fluidic Circuits for Analysis of Cells and Methods Relating Thereto                                      | 11/13/02           |
| UU-23           | Methods and Apparatus for Blood Typing with Optical Bio-discs                                                                  | 11/15/02           |
| UU-24           | Magneto-Optical Bio-Discs and Systems Including Related Methods                                                                | 11/27/02           |

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| BTI Code | Title                                                                                                                                       | Filing Date |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| UU-25    | Method and Apparatus for Visualizing Data                                                                                                   | 1/13/03     |
| UU-26    | Methods and Apparatus for Extracting Data From an Optical Analysis Disc                                                                     | 1/14/03     |
| UU-27    | Optical Discs Including Equi-Radial and/or Spiral Analysis Zones and Related Disc Drive Systems and Methods                                 | 1/15/03     |
| UU-28    | Bio-Safe Dispenser and Optical Analysis Disc Assembly                                                                                       | 1/17/03     |
| UU-29    | Processes for Manufacturing Optical Analysis Discs with Molded Microfluidic Structures and Discs Made According Thereto                     | 1/21/03     |
| UU-30    | Multi-Purpose Optical Analysis Disc for Conducting Assays and Related Methods for Attaching Capture Agents                                  | 1/21/03     |
| UU-31    | Method for Triggering Through Disc Grooves and Related Optical Analysis Discs and System                                                    | 1/23/03     |
| UU-32    | Bio-Safety Features for Optical Analysis Disc and Disc System Including Same                                                                | 1/23/03     |
| UU-33    | Manufacturing Processes for Making Optical Analysis Discs Including Successive Patterning Operations and Optical Discs Thereby Manufactured | 1/24/03     |
| UU-34    | Processes for Manufacturing Optical Analysis Discs with Molded Microfluidic Structures and Discs Made According Thereto                     | 1/27/03     |
| UU-35    | Method and Apparatus for Logical Triggering                                                                                                 | 1/28/03     |
| UU-36    | Methods for Synthesis of Bio-Active Nanoparticles and Nanocapsules for Use in Optical Bio-Disc Assays and Disc Assembly Including Same      | 1/30/03     |
| UU-37    | Methods and An Apparatus for Multi-Use Mapping of An Optical Bio-Disc                                                                       | 2/19/03     |

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# International Unpublished Applications

| BTI Code | Title                                                                                                                                       | Filing Date |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| U 1      | Cassette and Applicator for Biological and Chemical Sample Collection                                                                       | 8/24/99     |
| U 2      | Cassette and Applicator for Biological and Chemical Sample Collection                                                                       | 9/9/99      |
| U 3      | Trackable Optical Discs with Concurrently Readable Nonoperational Structures                                                                | 4/24/00     |
| U 4      | Multi-Parameter Assays Including Analysis Discs and Methods Relating Thereto                                                                | 4/11/02     |
| U 5      | Optical Disc System and Related Detecting Methods for Analysis of Microscopic Structures                                                    | 7/12/02     |
| U 6      | Multi-Purpose Optical Analysis Optical Bio-Disc for Conducting Assays and Various Reporting Agents for Use Therewith                        | 7/12/02     |
| U 7      | Capture Layer Assemblies for Cellular Assays Including Related Optical Analysis Discs and Methods                                           | 8/30/02     |
| U 8      | Segmented Area Detector for Bio-drive and Methods Relating Thereto                                                                          | 10/24/02    |
| U 9      | Methods and Apparatus for Extracting Data From an Optical Analysis Disc                                                                     | 1/14/03     |
| U 10     | Optical Discs Including Equi-Radial and/or Spiral Analysis Zones and Related Disc Drive Systems and Methods                                 | 1/15/03     |
| U 11     | Bio-Safe Dispenser and Optical Analysis Disc Assembly                                                                                       | 1/17/03     |
| U 12     | Processes for Manufacturing Optical Analysis Discs with Molded Microfluidic Structures and Discs Made According Thereto                     | 1/21/03     |
| U 13     | Multi-Purpose Optical Analysis Disc for Conducting Assays and Related Methods for Attaching Capture Agents                                  | 1/21/03     |
| U 14     | Method for Triggering Through Disc Grooves and Related Optical Analysis Discs and System                                                    | 1/23/03     |
| U 15     | Bio-Safety Features for Optical Analysis Disc and Disc System Including Same                                                                | 1/23/03     |
| U 16     | Manufacturing Processes for Making Optical Analysis Discs Including Successive Patterning Operations and Optical Discs Thereby Manufactured | 1/24/03     |
| U 17     | Processes for Manufacturing Optical Analysis Discs with Molded Microfluidic Structures and Discs Made According Thereto                     | 1/27/03     |
| U 18     | Method and Apparatus for Logical Triggering                                                                                                 | 1/28/03     |
| U 19     | Methods for Synthesis of Bio-Active Nanoparticles and Nanocapsules for Use in Optical Bio-Disc Assays and Disc Assembly Including Same      | 1/30/03     |
| U 20     | Methods and An Apparatus for Multi-Use Mapping of An Optical Bio-Disc                                                                       | 2/19/03     |
| U 21     | Optical Discs Including Equi-Radial and/or Spiral Analysis Zones and Related Disc Drive Systems and Methods                                 | 7/10/03     |

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